

AMENDMENTS TO THE CLAIMS

Please cancel claims 54-101 and add claims 102-154. A complete listing of claims pending in the application following entry of this Amendment are presented as follows:

1-101. (Cancelled)

102. (New) A fluid system for an article of footwear, the fluid system comprising:

a pair of polymer sheets that define a pump chamber, a pressure chamber positioned adjacent to the pump chamber, and a fluid path extending from the pump chamber to the pressure chamber to place the pump chamber and the pressure chamber in one-directional fluid communication; and

a bond that joins the polymer sheets and forms edges of both the pump chamber and the pressure chamber, the bond being located between areas of the polymer sheets that define the pump chamber and the pressure chamber, and the bond separating fluid in the pump chamber from fluid in the pressure chamber, the pump chamber and the pressure chamber being located on opposite sides of a portion of the bond.

103. (New) The fluid system recited in claim 102, wherein the pressure chamber has a concave configuration and the pump chamber is at least partially positioned within an area formed by the concave configuration.

104. (New) The fluid system recited in claim 102, wherein a portion of the bond has a curved configuration that defines a concavity in the pressure chamber, the pump chamber being at least partially positioned within an area formed by the concavity in the pressure chamber.

105. (New) The fluid system recited in claim 102, wherein a top portion of the pressure chamber extends above the pump chamber.

106. (New) The fluid system recited in claim 102, wherein a top portion of the pump chamber extends above the pressure chamber.

107. (New) The fluid system recited in claim 102, wherein a valve is positioned between the polymer sheets and within the fluid path to permit fluid flow from the pump chamber to the pressure chamber and to substantially prevent fluid flow from the pressure chamber to the pump chamber.

108. (New) The fluid system recited in claim 107, wherein the valve is formed from at least one layer of polymer material.

109. (New) The fluid system recited in claim 108, wherein the valve includes an inlet that is biased open with at least one weld bead positioned within the inlet.

110. (New) The fluid system recited in claim 102, wherein another fluid path with a filter assembly extends from an exterior of the fluid system to the pump chamber to place the pump chamber in fluid communication with the exterior of the footwear.

111. (New) The fluid system recited in claim 110, wherein the filter assembly includes a filter material that permits air to enter the fluid system and restricts liquids and particulates from entering the fluid system.

112. (New) The fluid system recited in claim 111, wherein the filter material includes a polytetrafluoroethylene material.

113. (New) The fluid system recited in claim 102, wherein the fluid path consists of a conduit and a valve.

114. (New) The fluid system recited in claim 102, wherein a fluid inlet for the fluid system is in fluid communication with the pump chamber, and the fluid inlet is separate from the pump chamber.

115. (New) A fluid system for an article of footwear, the fluid system comprising:

a pair of polymer sheets that define a pump chamber, a pressure chamber positioned adjacent to the pump chamber, and a fluid path extending from the pump chamber to the pressure chamber to place the pump chamber and the pressure chamber in fluid communication;

a bond that joins the polymer sheets and forms edges of both the pump chamber and the pressure chamber, the bond being located between areas of the polymer sheets that define the pump chamber and the pressure chamber, and the bond separating fluid in the pump chamber from fluid in the pressure chamber; and

a valve positioned between the polymer sheets and within the fluid path to permit fluid flow from the pump chamber to the pressure chamber and to substantially prevent fluid flow from the pressure chamber to the pump chamber,

wherein the pump chamber and the pressure chamber are located on opposite sides of the bond and border the bond, and the bond has a curved configuration that defines a concavity in the pressure chamber, the pump chamber being at least partially positioned within an area formed by the concavity in the pressure chamber.

116. (New) The fluid system recited in claim 115, wherein the valve is formed from at least one layer of polymer material.

117. (New) The fluid system recited in claim 116, wherein the valve includes an inlet that is biased open with at least one weld bead positioned within the inlet.

118. (New) The fluid system recited in claim 115, wherein another fluid path with a filter assembly extends from an exterior of the fluid system to the pump chamber to place the pump chamber in fluid communication with the exterior of the footwear.

119. (New) The fluid system recited in claim 118, wherein the filter assembly includes a filter material that permits air to enter the fluid system and restricts liquids and particulates from entering the fluid system.

120. (New) The fluid system recited in claim 119, wherein the filter material includes a polytetrafluoroethylene material.

121. (New) The fluid system recited in claim 115, wherein the fluid path consists of a conduit and the valve.

122. (New) The fluid system recited in claim 115, wherein a fluid inlet for the fluid system is in fluid communication with the pump chamber, and the fluid inlet is separate from the pump chamber.

123. (New) A fluid system for an article of footwear, the fluid system comprising:

a first polymer sheet and a second polymer sheet, the first polymer sheet having a pump chamber area, a pressure chamber area, a bond area, and a fluid path area, an edge of the pump chamber area being parallel to an edge of the pressure chamber area, and at least a portion of the bond area being located between the edge of the pump chamber area and the edge of the pressure chamber area; and

a bond that joins the bond area of the first polymer sheet to the second polymer sheet and defines (a) a pump chamber between the first polymer sheet and the second polymer sheet and in a location corresponding with the pump chamber area, (b) a pressure chamber between the first polymer sheet and the second polymer sheet and in a location corresponding with the pressure chamber area, and (c) a one-directional fluid path between the first polymer sheet and the second polymer sheet and in a location corresponding with the fluid path area, the fluid path extending from the pump chamber to the pressure chamber to place the pump chamber and the pressure chamber in fluid communication, at least a portion of the bond being positioned between the edge of the pump chamber area and the edge of the pressure chamber area to separate fluid in the pump chamber from fluid in the pressure chamber.

124. (New) The fluid system recited in claim 123, wherein the pressure chamber has a concave configuration and the pump chamber is at least partially positioned within an area formed by the concave configuration.

125. (New) The fluid system recited in claim 123, wherein a top portion of the pressure chamber extends above the pump chamber.

126. (New) The fluid system recited in claim 123, wherein a top portion of the pump chamber extends above the pressure chamber.

127. (New) The fluid system recited in claim 123, wherein a valve is positioned between the polymer sheets and within the fluid path to permit fluid flow from the pump chamber to the pressure chamber and to substantially prevent fluid flow from the pressure chamber to the pump chamber.

128. (New) The fluid system recited in claim 127, wherein the valve is formed from at least one layer of polymer material.

129. (New) The fluid system recited in claim 128, wherein the valve includes an inlet that is biased open with at least one weld bead positioned within the inlet.

130. (New) The fluid system recited in claim 123, wherein another fluid path with a filter assembly extends from an exterior of the fluid system to the pump chamber to place the pump chamber in fluid communication with the exterior of the footwear.

131. (New) The fluid system recited in claim 130, wherein the filter assembly includes a filter material that permits air to enter the fluid system and restricts liquids and particulates from entering the fluid system.

132. (New) The fluid system recited in claim 131, wherein the filter material includes a polytetrafluoroethylene material.

133. (New) The fluid system recited in claim 123, wherein the fluid path consists of a conduit and a valve.

134. (New) The fluid system recited in claim 123, wherein a fluid inlet for the fluid system is in fluid communication with the pump chamber, and the fluid inlet is separate from the pump chamber.

135. (New) A fluid system for an article of footwear, the fluid system comprising:

a pair of polymer sheets that define a pump chamber, a pressure chamber positioned adjacent to the pump chamber, and a fluid path extending from the pump chamber to the pressure chamber to place the pump chamber and the pressure chamber in fluid communication; and

a bond having a first edge and an opposite a second edge separated by an area where the polymer sheets are joined together, the first edge forming a border of the pump chamber, and the second edge forming a border of the pressure chamber, the bond separating fluid in the pump chamber from fluid in the pressure chamber,

wherein the first edge and the second edge define an area located between the pump chamber and the pressure chamber, the fluid path being absent from the area located between the pump chamber and the pressure chamber.

136. (New) The fluid system recited in claim 135, wherein the pressure chamber has a concave configuration and the pump chamber is at least partially positioned within an area formed by the concave configuration.

137. (New) The fluid system recited in claim 135, wherein a valve is positioned between the polymer sheets and within the fluid path to permit fluid flow from the pump chamber to the pressure chamber and to substantially prevent fluid flow from the pressure chamber to the pump chamber.

138. (New) The fluid system recited in claim 135, wherein the valve is formed from at least one layer of polymer material.

139. (New) The fluid system recited in claim 138, wherein the valve includes an inlet that is biased open with at least one weld bead positioned within the inlet.

140. (New) The fluid system recited in claim 135, wherein another fluid path with a filter assembly extends from an exterior of the fluid system to the pump chamber to place the pump chamber in fluid communication with the exterior of the footwear.

141. (New) The fluid system recited in claim 140, wherein the filter assembly includes a filter material that permits air to enter the fluid system and restricts liquids and particulates from entering the fluid system.

142. (New) The fluid system recited in claim 141, wherein the filter material includes a polytetrafluoroethylene material.

143. (New) The fluid system recited in claim 135, wherein the fluid path consists of a conduit and a valve.

144. (New) The fluid system recited in claim 135, wherein a fluid inlet for the fluid system is in fluid communication with the pump chamber, and the fluid inlet is separate from the pump chamber.

145. (New) A fluid system for an article of footwear, the fluid system comprising:
a pair of polymer sheets that define a pump chamber, a pressure chamber, a first fluid path, and a second fluid path, the first fluid path extending from the pump chamber to the pressure chamber to place the pump chamber and the pressure chamber in fluid communication, and the second fluid path extending from an exterior of the fluid system to the pump chamber to place the pump chamber in fluid communication with the exterior of the fluid system;

a first valve positioned between the polymer sheets and within the first fluid path to permit fluid flow from the pump chamber to the pressure chamber and to limit fluid flow from the pressure chamber to the pump chamber;

a second valve positioned between the polymer sheets and within the second fluid path to permit fluid flow from the exterior of the fluid system to the pump chamber and to limit fluid flow from the pump chamber to the exterior; and

a single bond that joins the polymer sheets and extends along a boundary of the pump chamber, the pressure chamber, the first fluid path, and the second fluid path, a portion of the bond being located between the pump chamber and the pressure chamber to separate fluid in the pump chamber from fluid in the pressure chamber, opposite sides of the portion of the bond being located immediately adjacent the pump chamber and the pressure chamber.

146. (New) The fluid system recited in claim 145, wherein the pressure chamber has a concave configuration and the pump chamber is at least partially positioned within an area formed by the concave configuration.

147. (New) The fluid system recited in claim 145, wherein the portion of the bond has a curved configuration that defines a concavity in the pressure chamber, the pump chamber being at least partially positioned within an area formed by the concavity in the pressure chamber.

148. (New) The fluid system recited in claim 145, wherein the valve is formed from at least one layer of polymer material.

149. (New) The fluid system recited in claim 148, wherein the valve includes an inlet that is biased open with at least one weld bead positioned within the inlet.

150. (New) A fluid system for an article of footwear, the fluid system comprising:

a pair of polymer sheets that define a pump chamber, a pressure chamber separated from the pump chamber by a space that is located between the pump chamber and the

pressure chamber, and a fluid path extending from the pump chamber to the pressure chamber to place the pump chamber and the pressure chamber in fluid communication, the fluid path being absent from the space; and
a bond that joins the polymer sheets and forms edges of both the pump chamber and the pressure chamber, the bond being positioned in the space, and the bond separating fluid in the pump chamber from fluid in the pressure chamber.

151. (New) The fluid system recited in claim 150, wherein the pressure chamber has a concave configuration and the pump chamber is at least partially positioned within an area formed by the concave configuration.

152. (New) The fluid system recited in claim 150, wherein the portion of the bond has a curved configuration that defines a concavity in the pressure chamber, the pump chamber being at least partially positioned within an area formed by the concavity in the pressure chamber.

153. (New) The fluid system recited in claim 150, wherein a valve is positioned between the polymer sheets and within the fluid path, the valve being formed from at least one layer of polymer material.

154. (New) The fluid system recited in claim 153, wherein the valve includes an inlet that is biased open with at least one weld bead positioned within the inlet.